

CLAIMS

1. A packaged electronic device comprising:

an electronic device (71);

5 a first container member (9) configured to mount said electronic device therein;

a second container member (2) configured to form a space (90) for housing said electronic device in corporation with said first container member;

10 an adhesive (3) configured to close the space by bonding said first container member and said second container member; and

a metal film (4) configured to cover an exposed face of said adhesive.

15 2. The packaged electronic device according to claim 1, wherein said metal film is a plating layer.

3. The packaged electronic device according to claim 2, wherein said adhesive contains metal particles (3b).

4. The packaged electronic device according to claim 1, wherein said second container member is made of a resin material.

5. The packaged electronic device according to claim 1, wherein said metal film covers an outer side surface of said second container member.

25 6. The packaged electronic device according to claim 1,

wherein said first container member is a flat member and said second container member has a recessed part covering said first container member.

7. The packaged electronic device according to claim 6, wherein said second container member has a flange part (21) to be bonded to said first container member by said adhesive formed in the rim part of said recessed part.

8. The packaged electronic device according to claim 1, wherein a moisture absorbent (22) is installed in said space.

9. A manufacturing method of a packaged electronic device comprising:

bonding a first container member (9) on which an electronic device is mounted and a second container member (2) configured to form a space for housing said electronic device in corporation with said first container member with an adhesive (3) so as to close the space; and

covering an exposed face of said adhesive with a metal film (4).

10. A packaged electronic device comprising:

an electronic device (171);

a first container member (109) configured to mount the electronic device thereon;

a second container member (102) configured to form a space (190) for housing said electronic device in

corporation with said first container member; and

a metal layer (103) configured to close said space by bonding said first container member and said second container member, to be formed by radiating energy wave to
5 a first metal part (131) of said first container member and a second metal part (132) of said second container member and bringing said first metal part and said second metal part into contact with each other.

11. The packaged electronic device according to claim 10,
10 wherein said metal layer is of gold.

12. The packaged electronic device according to claim 10, wherein said first container member or said second container member is made of resin.

13. A manufacturing method of a packaged electronic device
15 comprising:

bonding a first container member (109) on which an electronic device is mounted and a second container member (102) configured to form a space (190) for housing said electronic device in corporation with said first container
20 member with a metal layer (103) for closing the space;

when said bonding, radiating energy wave to a first metal part (131) of said first container member and a second metal part (132) of said second container member; and

25 forming said metal layer by bringing said first metal

part and said second metal part radiated with said energy wave into contact with each other.

14. The manufacturing method of a packaged electronic device according to claim 13, wherein said energy wave
5 radiation is carried out in atmospheric air while said first metal part and second metal part are heated at a room temperature or higher and 150°C or lower.

15. The manufacturing method of a packaged electronic device according to claim 13, wherein said energy wave
10 radiation to said first metal part and said second metal part and formation of said metal layer are carried out in reduced pressure atmosphere or inert gas atmosphere.

16. A packaged electronic device comprising:

a container (210) configured to form a closed inner
15 space (211) by a first inner face (221), a second inner face (231) on the opposite to said first inner face, and side faces (241) perpendicular to said first inner face and said second inner face;

a first electronic device (261) to be mounted on a
20 first mounting face (221) of said first inner face, second inner face, or side faces;

a second electronic device (261) to be mounted on a
second mounting face (231) different from said first
mounting face of said first inner face, second inner face,
25 or side faces;

a first outer electrode (223) formed on an outer face of said container facing to said first mounting face and to be electrically connected with said first electronic device; and

5 a second outer electrode (233) formed on an outer face of said container facing to said second mounting face and to be electrically connected with said second electronic device.

17. The packaged electronic device according to claim 16,
10 further comprising third electronic devices (271, 272) to be electrically connected with said first outer electrode and a substrate (108) configured to be electrically connected with said second outer electrode.

18. The packaged electronic device according to claim 16,
15 wherein said container has a main body member (203, 204, 212) having a recessed part (213) and mounting said second electronic device on the bottom of said recessed part, and a first cover member (202) attached to an aperture of said recessed part and mounting said first electronic device.

19. The packaged electronic device according to claim 18,
20 wherein said main body member includes a cylindrical member (204, 212) having said side faces in the inside, and a second cover member (203, 212) attached to said cylindrical member to form said bottom face and mounting said second
25 electronic device thereon.

20. The packaged electronic device according to claim 18, wherein said main body member and first cover member are made of resin.

21. The packaged electronic device according to claim 18,
5 further comprising a metal layer (251) configured to close said inner space by bonding said main body member and first cover member, and to be formed by radiating energy wave to metal parts (2511, 2512) formed respectively on said main body member and first cover member and bringing both metal
10 parts into contact with each other.

22. A manufacturing method of a packaged electronic device comprising:

mounting a first electronic device (261) to be connected electrically with a via (224) on a first mounting
15 face (221) of a cover member (202) having the via formed therein;

mounting a second electronic device (261) to be connected electrically with a via (234) on a second mounting face (231) of a main body member (203, 204, 212)
20 having the via formed therein and forming a closed inner space (211) in corporation with said cover member; and

forming a packaged electronic device by bonding said cover member and said main body member so as to arrange said first electronic device and said second electronic
25 device in said inner space and thereby closing said inner

space.

23. The manufacturing method of a packaged electronic device according to claim 22, wherein bonding of said cover member and main body member is carried out by radiating energy wave to a first metal part (2512) formed on said first mounting face of said cover member and a second metal part (2511) formed on said main body member, and thereafter forming a packaged electronic device by bonding said cover member and main body member and closing said inner space by bonding said first metal part and second metal part.

24. The manufacturing method of a packaged electronic device according to claim 23, wherein said energy wave radiation is carried out in reduced pressure or inert gas atmosphere.

25. The manufacturing method of a packaged electronic device according to claim 23, wherein said energy wave radiation is carried out in atmospheric air while said first metal part and second metal part are heated at a room temperature or higher and 150°C or lower.

26. The manufacturing method of a packaged electronic device according to claim 22, wherein said electric connection of said vias with said first electronic device and second electronic device is carried out by radiating energy wave to said vias, and electrodes of said first electronic device and second electronic device; and

thereafter bringing said vias into contact with said first electronic device and second electronic device.

27. The manufacturing method of a packaged electronic device according to claim 22, wherein said electric
5 connection of said vias with said first electronic device and second electronic device is carried out by providing a curable anisotropic conductive or non-conductive resin between electrodes of said first electronic device and second electronic device, and said vias.